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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,059	11/18/2003	Lewis Timothy Lukich	DN2003186	4788

27280 7590 11/29/2006

THE GOODYEAR TIRE & RUBBER COMPANY  
INTELLECTUAL PROPERTY DEPARTMENT 823  
1144 EAST MARKET STREET  
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EXAMINER

MAKI, STEVEN D

ART UNIT PAPER NUMBER

1733

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/716,059

Applicant(s)

LUKICH ET AL.

Examiner

Steven D. Maki

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1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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1) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2) **Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sandstrom et al (US 2003/0089438) in view of Cole (WO 02/40581) and Egan (US 4,249,588) and optionally Japan 209 (JP 8-324209).**

Sandstrom et al discloses a pneumatic agricultural tire (farm tractor tire) having a tread, sidewalls, carcass and beads wherein the tread comprises lugs. The lugs have a height of 12.5 cm to 80 cm. The tread comprises a *shock dampening* rubber composition comprising (A) 70 to 100 parts at least one **isobutylene based rubber** selected from (1) butyl rubber as a copolymer of isobutylene and isoprene wherein the copolymer contains from about 2 to about 6 weight percent units derived from isoprene, (2) halobutyl rubber as a halogenated butyl rubber where the halogen is selected from bromine or chlorine, and (3) brominated copolymer of isobutylene and paramethylstyrene (paragraphs 12-17) and (B) zero to about 30 parts at least one **diene based elastomer** selected from polymers of isoprene and/or 1,3-butadiene and copolymers of styrene with isoprene and/or 1,3-butadiene. Sandstrom et al does not recite that the tread rubber has a closed cellular structure.

As to claim 1, it would have been obvious to one of ordinary skill in the art to include a blowing agent in Sandstrom et al's rubber composition such that the rubber composition of the tread and tread lugs consists of a "closed cellular structured rubber

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composition" since (1) Sandstrom et al teaches that the disclosed rubber composition provides the tread of a pneumatic agricultural tire with a shock dampening / shock absorbing effect, (2) Cole, directed to the problem of providing a pneumatic tire with a shock absorbing tread, suggests adding blowing agents to relatively hard solid rubber formulations to form an entire tire outer including its lugs such that it consists of a relatively hard closed cell sponge rubber having higher dampening characteristics (figure 4) and (3) Egan, directed to providing the tread of an off-road tire with closed cells so that the tire has a softer ride, teaches that the rubber (such as butyl rubber as found in Sandstrom et al) of the entire ground contacting tread portion 7 should contain closed cells so that desired ride qualities are obtained and optionally (4) Japan 209 suggests providing an agricultural tire having lugs with an outer layer comprising closed cells so as to prevent bringing of mud adhered to the tread to the dry road when the vehicle leaves the muddy fields.

With respect to NTG, it would have been obvious to one of ordinary skill in the art to provide Sandstrom et al's tread with a net to gross of 15-22% since (1) Sandstrom et al's tread is for a pneumatic agricultural tire and (2) it is taken as well known / conventional per se to provide the tread of a pneumatic agricultural tire with a net to gross of less than 35% or less than 25%.

With respect to cell size, the claimed closed cell size would have been obvious and could have been determined without undue experimentation in view of Cole's suggestion to add blowing agent so as to obtain desired damping characteristics.

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Motivated by the desire found in Sandstrom et al to provide a tread having lugs for a pneumatic agricultural tire (off-road tire) with a substantial shock absorbing property / high dampening property, one of ordinary skill in the art would have found it obvious to use Cole's teaching to improve the shock absorbency / dampening characteristics of an off-road tire with tread lugs by blowing Sandstrom et al's entire tread rubber composition with Cole's blowing agent so as to produce a micro porous closed cellular rubber having good shock absorbing characteristics / higher dampening characteristics. One of ordinary skill in the art would have had a reasonable expectation of success for providing the tread of Sandstrom et al's agricultural tire (off-road tire) with closed cells since (1) Cole's invention is to convert a hard rubber having low shock-dampening characteristics for an off-road tire to a closed cell rubber having good shock absorption / higher dampening characteristics and (2) the optional Japan 209 evidences that closed cell rubber can be used in an off-road tire such as a pneumatic agricultural tire. With respect to "consists of", both Cole and Egan suggests using closed cell rubber for *at least the entire tread* of a pneumatic tire.

## Remarks

3) Applicant's arguments filed 9-6-06 have been fully considered but they are not persuasive.

Applicant argues and the examiner agrees that Sandstrom does not disclose a closed cell foam rubber. However, the subject matter of closed cell foam rubber is disclosed by Cole and Egan.

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Applicant argues that Cole's tire is not related to Applicant's required type. The claimed tire is a type of off road pneumatic tire (NTG = 15-22% and lug height = 12.5 to 80 cm). Sandstrom et al's pneumatic agricultural tire is also a type of off-road pneumatic tire. Cole's teachings are relevant to Sandstrom et al since Cole is directed to off road tires. In other words, Sandstrom and Cole are directed to the same field of off road pneumatic tires. Moreover, Cole is directed to the same problem found in Sandstrom et al. In particular, both Cole and Sandstrom et al are directed to improving the shock absorption characteristics of an off-road tire. One of ordinary skill in the art would have found it obvious to use Cole's teaching to form closed cells to rubber in the rubber outer layer (rubber tread) of Sandstrom to obtain improve shock absorbing characteristics as desired by Sandstrom et al. Instead of merely inviting one of ordinary skill in the art to try closed cell rubber, Cole affirmatively instructs and motivates one of ordinary skill in the art to obtain higher dampening characteristics by forming closed cells in rubber outer layer of a pneumatic tire. Cole teaches that closed cells should [in contrast to could] be formed in the outer layer of a pneumatic tire to improve shock absorbing ability of the tire. Improved shock absorbing ability is highly desired in Sandstrom et al. See title of Sandstrom et al.

With respect to applicant's arguments regarding Egan and the optional Japan 209, Egan constitutes additional evidence that the tread of an off road pneumatic tire should contain closed cells and the optional Japan 209 suggests using closed cells in rubber of the tread area of the tire even when the specific type of off road pneumatic tire is a pneumatic agricultural tire.

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4) No claim is allowed.

5) **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

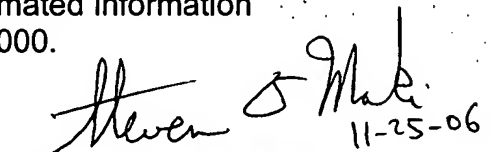
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

6) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven D. Maki  
November 25, 2006

  
STEVEN D. MAKI  
PRIMARY EXAMINER  
11-25-06